

IN THE CLAIMS

For the convenience of the Examiner, all claims have been presented, whether or not an amendment has been made. The claims have been amended as follows:

Claims 1-39 (Canceled)

40. **(Currently Amended)** A medical implant, comprising:
a body adapted for implantation into a sinus tarsi of a subtalar joint in a human foot,
the body comprising: the body having a length;
a first end having a first diameter;
a second end having a second diameter;
the body being tapered along at least a majority of the length; and
at least one continuous and uninterrupted thread including a crest with a
substantially flat surface and having a substantially constant thread height and
helically traversing a length of an exterior surface of the body, the length spanning
from the first end to the second end;
a recessed engagement in the first end; and wherein:
a circumference of the exterior surface tapers from the first diameter to the
second diameter along the length of the body.
~~formed around an exterior surface of the body and extending at least a majority of the~~
~~length of the body, the at least one thread being configured to at least partially prevent~~
~~displacement of a talus without penetrating bone, the at least one thread being tapered with~~
~~respect to a longitudinal axis of the body, the taper of the at least one thread being generally~~
~~conical; and~~
a majority of the ~~at least one thread~~ having a substantially constant thread height and a
substantially constant pitch.

41. **(Currently Amended)** The medical implant of Claim 40, wherein the taper
circumference of the body exterior surface tapers uniformly from the first end to the second
end according to a predetermined taper angle. is substantially equal to the taper of the at least
one thread.

42. **(Currently Amended)** The medical implant of Claim 40, wherein the recessed engagement comprises:

a hexagonal portion;

a cylindrical portion; and

a countersink portion. ~~a majority of the taper of the at least one thread is uniform.~~

43. **(Currently Amended)** The medical implant of Claim ~~42~~ 41, wherein the taper angle ~~uniform taper of the at least one thread~~ measures between 15 degrees and 20 degrees.

44. **(Currently Amended)** The medical implant of Claim 42, wherein the taper angle is configured to alleviate pressure points between the body and a talus bone and the body and a calcaneus bone when the body is implanted into the sinus tarsi. ~~uniform taper of the at least one thread measures approximately 18 degrees.~~

45. **(Canceled)**

46. **(Currently Amended)** The medical implant of Claim ~~40~~ 45, wherein:
a majority of the at least one thread has a substantially constant pitch;
the majority of the at least one thread further includes a crest width;
~~wherein~~ the ratio of the crest width to the thread height is at least 0.3; and further comprising:-
a thread angle measuring approximately 60 degrees; and
a thread root width measuring between 0.020 inches and 0.040 inches.

47. **(Currently Amended)** The medical implant of Claim 45 40, wherein:
the first end comprises a first flat face encircling the recessed engagement; and
the second end comprises a second flat face encircling a bore.
~~the majority of the at least one thread further includes a crest width, wherein the ratio~~
~~of the crest width to the pitch is at least 0.25.~~

48. **(Currently Amended)** The medical implant of Claim 45 40, wherein the
majority of the at least one thread further includes a crest width and a substantially constant
pitch, wherein the ratio of the crest width to the pitch is between 0.25 and 0.4.

49. **(Currently Amended)** The medical implant of Claim 45 40, wherein the
majority of the at least one thread further includes a thread root width measuring between
0.020 inches and 0.040 inches.

50. **(Currently Amended)** The medical implant of Claim 45 40, wherein:
the body is generally conical; and
the circumference of the exterior surface comprises the crest of the thread.
~~the majority of the at least one thread further includes:~~
~~a thread angle measuring approximately 60 degrees;~~
~~a crest width, wherein the ratio of the crest width to the thread height is at least 0.3;~~
and
~~a thread root width measuring between 0.020 inches and 0.040 inches.~~

51. **(Currently Amended)** The medical implant of Claim 50 41, wherein:
~~the uniform taper of the at least one thread~~ taper angle measures approximately 18
degrees;
the thread height is approximately 0.032 inches;
the a root width of the thread is approximately 0.030 inches; and
the a pitch of the thread is approximately 0.090 inches.

52. **(Currently Amended)** The medical implant of Claim 40 ~~50~~, wherein:
the thread is configured to secure the body into the sinus tarsi;
the body is configured to:
reduce calcaneal eversion; and
at least partially prevent displacement of a talus without penetrating bone.
~~the uniform taper of the at least one thread measures 18 degrees;~~
~~the thread height is 0.032 inches;~~
~~the root width is 0.030 inches; and~~
~~the pitch is 0.090 inches.~~

53. **(Currently Amended)** The medical implant of Claim 40 ~~50~~, wherein:
the entirety of the body is adapted for insertion into the sinus tarsi.
~~the uniform taper of the at least one thread measures approximately 18 degrees;~~
~~the thread height is approximately 0.041 inches;~~
~~the root width is approximately 0.030 inches; and~~
~~the pitch is approximately 0.100 inches.~~

54. **(Currently Amended)** The medical implant of Claim 40 ~~50~~, further
comprising a bore coaxial with the recessed engagement and extending from the recessed
engagement to the second end.

~~wherein:~~
~~the uniform taper of the at least one thread measures 18 degrees;~~
~~the thread height is 0.041 inches;~~
~~the root width is 0.030 inches; and~~
~~the pitch is 0.100 inches.~~

55. **(Currently Amended)** A method of forming a medical implant, comprising:
providing a body adapted for implantation into a sinus tarsi of a subtalar joint in a human foot, ~~the body comprising: the body having a length,~~

a first end having a first diameter;

a second end having a second diameter;

~~the body being tapered along at least a majority of the length; and~~

forming at least one continuous and uninterrupted thread including a crest with a substantially flat surface and having a substantially constant thread height and helically traversing a length of an exterior surface of the body, the length spanning from the first end to the second end;

forming a recessed engagement in the first end; and wherein:

a circumference of the exterior surface tapers from the first diameter to the second diameter along the length of the body.

~~around an exterior surface of the body, the at least one thread extending at least a majority of the length of the body, the at least one thread being configured to at least partially prevent displacement of a talus without penetrating bone, the at least one thread being tapered with respect to a longitudinal axis of the body, the taper of the at least one thread being generally conical, a majority of the at least one thread having a substantially constant thread height and a substantially constant pitch.~~

56. **(Currently Amended)** The method of Claim 55, wherein the taper circumference of the body exterior surface tapers uniformly from the first end to the second end according to a predetermined taper angle. ~~is substantially equal to the taper of the at least one thread.~~

57. **(Currently Amended)** The method of Claim 55, wherein the recessed engagement comprises:

a hexagonal portion;

a cylindrical portion; and

a countersink portion. ~~a majority of the taper of the at least one thread is uniform.~~

Claims 58 - 61 **(Canceled)**

62. **(Currently Amended)** The method of Claim ~~60~~ 55, wherein:

the first end comprises:

a first flat face; and

the second end comprises a second flat face.

~~the majority of the at least one thread further includes a crest width, wherein the ratio of the crest width to the pitch is at least 0.25.~~

63. **(Currently Amended)** The method of Claim ~~60~~ 55, further comprising forming a bore coaxial with the recessed engagement and extending from the recessed engagement to the second end.

~~wherein the majority of the at least one thread further includes a crest width, wherein the ratio of the crest width to the pitch is between 0.25 and 0.4.~~

64. **(Canceled)**

65. **(Currently Amended)** The method of Claim 55 ~~60~~, wherein the majority of the at least one thread further includes:

a thread angle measuring approximately 60 degrees;

a crest width, wherein the ratio of the crest width to the thread height is at least 0.3;

and

a thread root width measuring between 0.020 inches and 0.040 inches.

66. **(Currently Amended)** The method of Claim 55 ~~65~~, wherein:

the body is generally conical; and

the circumference of the exterior surface comprises the crest of the thread. -

~~the majority of the at least one thread further includes:~~

~~a thread angle measuring approximately 60 degrees;~~

~~a crest width, wherein the ratio of the crest width to the thread height is at least 0.3;~~

and

~~a thread root width measuring between 0.020 inches and 0.040 inches.~~

67. **(Currently Amended)** A method, comprising:
inserting into the sinus tarsi:
a body adapted for implantation into the sinus tarsi of a subtalar joint in a human foot,
the body comprising: the body having a length;
a first end having a first diameter;
a second end having a second diameter;
the body being tapered along at least a majority of the length; and
at least one continuous and uninterrupted thread including a crest with a
substantially flat surface and having a substantially constant thread height and
helically traversing a length of an exterior surface of the body, the length spanning
from the first end to the second end;
a recessed engagement in the first end;
a bore coaxial with the recessed engagement and extending from the recessed
engagement to the second end; and wherein:
a circumference of the exterior surface tapers from the first diameter to the second
diameter along the length of the body.

~~The method of Claim 65, wherein:~~

~~the uniform taper of the at least one thread measures 18 degrees;~~
~~the thread height is 0.032 inches;~~
~~the root width is 0.030 inches; and~~
~~the pitch is 0.090 inches.~~

68. **(Currently Amended)** The method of Claim ~~65~~ 67, wherein:
the circumference of the exterior surface tapers uniformly from the first end to the
second end according to a first taper angle; the first taper angle defined by a second taper
angle of the sinus tarsi.

~~the uniform taper of the at least one thread measures approximately 18 degrees;~~
~~the thread height is approximately 0.041 inches;~~
~~the root width is approximately 0.030 inches; and~~
~~the pitch is approximately 0.100 inches.~~

69. **(Currently Amended)** The method of Claim 67 ~~65~~, wherein: the entirety of the body is inserted into the sinus tarsi.

~~the uniform taper of the at least one thread measures 18 degrees;~~

~~the thread height is 0.041 inches;~~

~~the root width is 0.030 inches; and~~

~~the pitch is 0.100 inches.~~

70. **(New)** A medical implant, comprising:
a body adapted for implantation into a sinus tarsi of a subtalar joint in a human foot,
the body comprising:

a first end having a first diameter;

a second end having a second diameter;

at least one continuous and uninterrupted thread including a crest with a substantially flat surface and having a substantially constant thread height and helically traversing a portion of the length of an exterior surface of the body, the length spanning from the first end to the second end;

a recessed engagement in the first end;

a bore coaxial with the recessed engagement and extending from the recessed engagement to the second end; and wherein:

a circumference of the exterior surface tapers from the first diameter to the second diameter along the length of the body.